



OIL ANALYSIS REPORT

WEAR	NORMAL
CONTAMINATION	NORMAL
FLUID CONDITION	NORMAL

Machine Id
60081
Component
Diesel Engine
Fluid
VALVOLINE 15W40 (--- GAL)

RECOMMENDATION

Resample at the next service interval to monitor.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		WC0887264	WC0809082	WC0809101
Sample Date		Client Info		27 Dec 2023	17 Sep 2023	21 Jun 2023
Machine Age	kms	Client Info		87867	64302	0
Oil Age	kms	Client Info		10000	10000	10000
Filter Age	kms	Client Info		10000	10000	10000
Oil Changed		Client Info		Changed	Changed	Changed
Filter Changed		Client Info		Changed	Changed	Changed
Sample Status				NORMAL	NORMAL	NORMAL

WEAR

Metal levels are typical for a new component breaking in.

Iron	ppm	ASTM D5185(m)	>75	11	21	20
Chromium	ppm	ASTM D5185(m)	>5	<1	<1	<1
Nickel	ppm	ASTM D5185(m)	>4	0	<1	<1
Titanium	ppm	ASTM D5185(m)	>2	0	0	<1
Silver	ppm	ASTM D5185(m)	>2	<1	1	1
Aluminum	ppm	ASTM D5185(m)	>15	2	2	2
Lead	ppm	ASTM D5185(m)	>25	0	<1	<1
Copper	ppm	ASTM D5185(m)	>100	2	12	5
Tin	ppm	ASTM D5185(m)	>4	0	<1	0
Vanadium	ppm	ASTM D5185(m)		0	0	0

CONTAMINATION

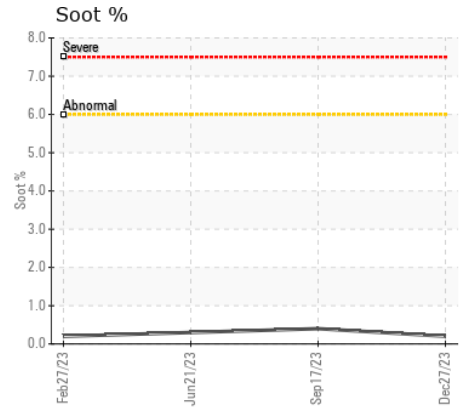
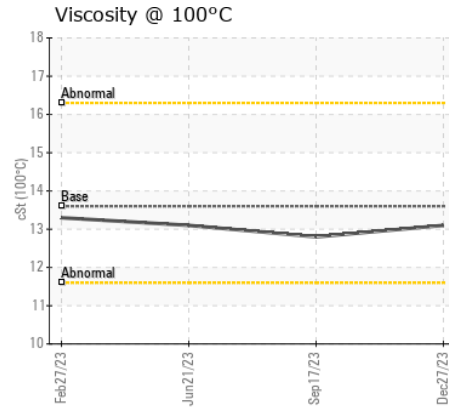
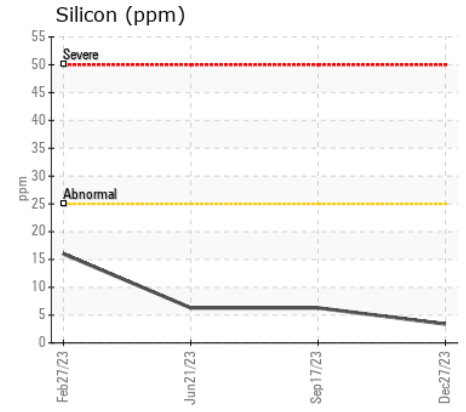
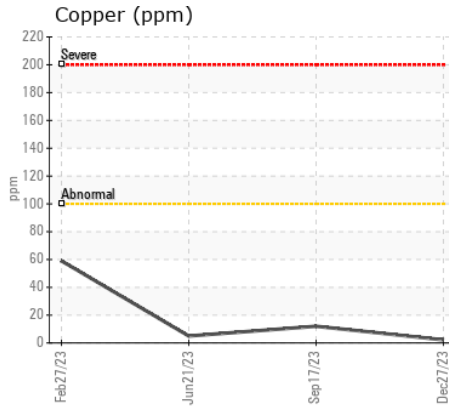
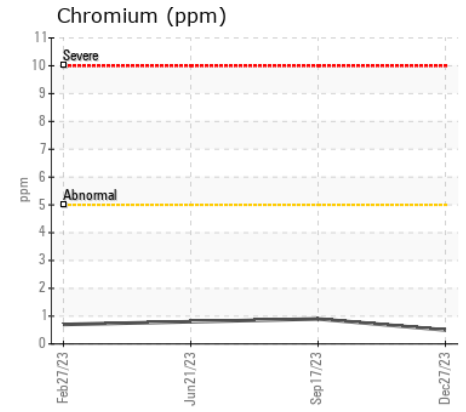
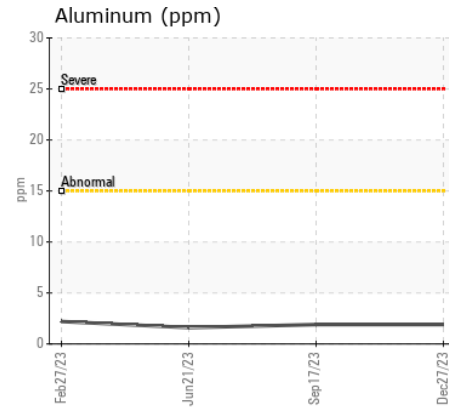
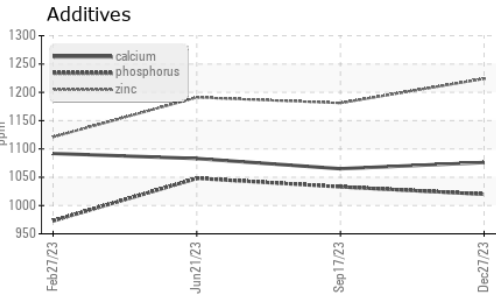
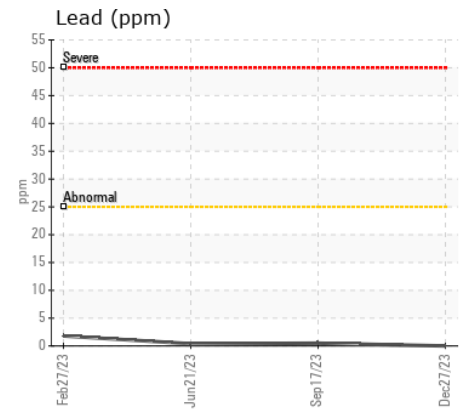
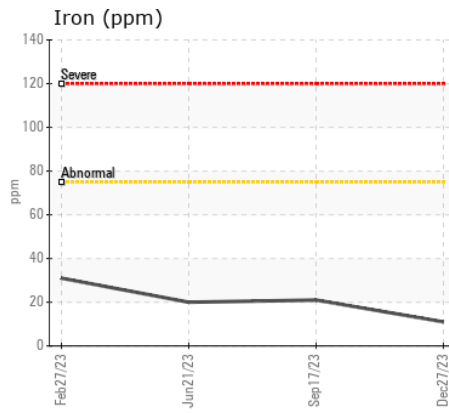
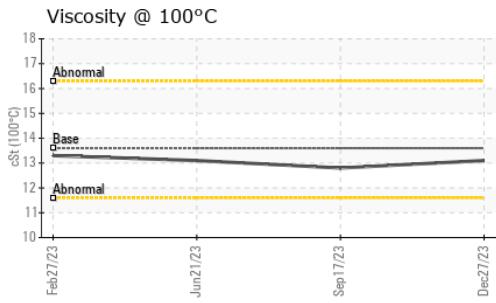
There is no indication of any contamination in the oil.

Silicon	ppm	ASTM D5185(m)	>25	3	6	6
Potassium	ppm	ASTM D5185(m)	>20	1	2	<1
Fuel		WC Method	>3.0	<1.0	<1.0	<1.0
Water		WC Method	>0.2	NEG	NEG	NEG
Glycol		WC Method		NEG	NEG	NEG
Soot %	%	ASTM D7844*	>6	0.2	0.4	0.3
Nitration	Abs/cm	ASTM D7624*	>20	7.4	8.4	8.3
Sulfation	Abs/.1mm	ASTM D7415*	>30	18.7	20.7	20.4
Emulsified Water	scalar	Visual*	>0.2	NEG	NEG	NEG

FLUID CONDITION

The condition of the oil is acceptable for the time in service.

Sodium	ppm	ASTM D5185(m)		5	6	6
Boron	ppm	ASTM D5185(m)	39	1	5	2
Barium	ppm	ASTM D5185(m)	1	0	0	0
Molybdenum	ppm	ASTM D5185(m)	49	59	59	59
Manganese	ppm	ASTM D5185(m)	1	0	<1	<1
Magnesium	ppm	ASTM D5185(m)	616	991	951	962
Calcium	ppm	ASTM D5185(m)	1554	1076	1065	1083
Phosphorus	ppm	ASTM D5185(m)	899	1020	1033	1048
Zinc	ppm	ASTM D5185(m)	1069	1224	1181	1191
Sulfur	ppm	ASTM D5185(m)	2624	2735	2442	2506
Oxidation	Abs/.1mm	ASTM D7414*	>25	14.8	17.3	17.4
Visc @ 100°C	cSt	ASTM D7279(m)	13.6	13.1	12.8	13.1



Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9
Sample No. : WC0887264 **Received** : 05 Jan 2024
Lab Number : 02606745 **Diagnosed** : 05 Jan 2024
Unique Number : 5707831 **Diagnostician** : Wes Davis
Test Package : MOB 1

CITY OF PETERBOROUGH
 791 WEBBER AVENUE., MUNICIPAL OPERATIONS CENTRE
 PETERBOROUGH, ON
 CA K9J 8N3
 Contact: Bryan Powers
 bpowers@peterborough.ca
 T: (705)745-1386
 F: (705)743-3223

To discuss this sample report, contact Customer Service at 1-800-268-2131.
 Test denoted (*) outside scope of accreditation, (m) method modified, (e) tested at external lab.
 Validity of results and interpretation are based on the sample and information as supplied.